

FIGURE - SKATING.



— BY —

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FIGURE-SKATING.

WITH SEVENTY-FOUR ILLUSTRATIONS AND
DIAGRAMS.

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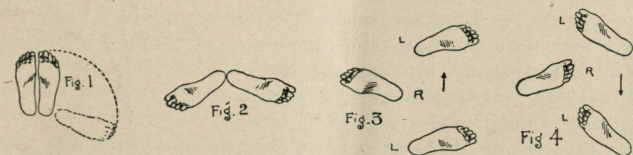
FIGURE=SKATING.

The Four Edges.

Late one winter I watched with joy the unexpected closing-in of a piece of open water left by ice-cutters in a shallow part of a pond near Boston. Early in the morning, before the sun should soften the ice, I was on hand with my skates.

Yes, the ice would bear! I surrendered myself to the delicious swing of the figure requiring the least effort—the cross-roll backward.

The bright sun was at my back, and my shadow flitted across the yellow sand beneath my feet. It was only the white marks



my skates made on the transparent ice that made evident to the eyes the existence of any medium between me and my shadow; and never since that delightful morning have I skated that figure without a sensation as nearly like that of flying as I expect ever to feel.

Does it ever occur to a schoolboy that he wastes more time on the ice ten times over than is necessary for the achievement of countless movements and sensations, such as are to be enjoyed in no other sport, any one of which is ample compensation for all the practice required?

One of the most attractive things about figure-skating is that when once learned it becomes an accomplishment for all one's life—a fascinating inducement to moderate exercise long after other outdoor amusements have lost their attractions.

I shall mark as the one sure sign of the approach of old age the time when my blood ceases to tingle at the sight of new black ice, and when I let some other "young fellow" try it before me.

It is a mistaken notion that figure-skating requires exceptionally strong ankles. Suppleness is a more essential quality, and suppleness may be cultivated or acquired. I have found that an exercise quite sufficient to develop both the strength and the suppleness of the ankles is to stand before dressing in the morning with the heels together; then, raising one slightly from the floor and using it as a centre, to describe rapidly with the foot, over and over again, as large a segment of a circle as I can (Fig. 1).

It is also good practice to stand just as long as the muscles will allow on the bare feet, with the heels close together, and pushed as far forward as possible (Fig. 2), the calves touching; or to walk toeing out and toeing in as far as may be, remembering in all the exercises to keep the leg as straight as possible.

It is a wise precaution to get one's skates ready early in the season, and the repetition of the above exercises in the house with the skates on before the ice comes will not only strengthen the ankles, but save much preliminary practice on fundamental figures. These should be done as represented in Figs. 3 and 4. Fig. 5 is the Spread Eagle.

Let me say a preliminary word about shoes.

During early practice the kind of skate is not of so much importance as the kind of shoe. Straps should be avoided because they stop the circulation, impede the free movement of the foot, and diminish the skater's self-reliance. The shoe, therefore, should be a snugly fitting, laced Balmoral or Blucher, and should be laced more tightly for skating than for walking.

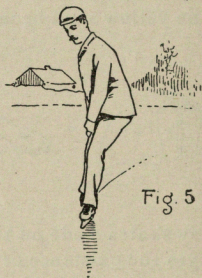
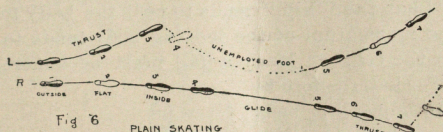


Fig. 5

Always carry an extra lacing. A cotton pad under the tongue, or even an extra pair of stockings, may sometimes render a loose shoe serviceable.

Leg boots, Congress and button boots are useless for figure-skating.

A skate shorter than the shoe is better than one longer; a thick blade is better than a thin one; and the skate should be

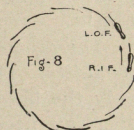


fastened so that the blade will come a trifle inside the middle of the sole.

We shall assume that our young figure-skater has learned plain skating and the lap-foot circle. He has observed that his progress on skates is made in two ways: first, by thrusting with one foot and sliding on the other (Fig. 6), and second, by crossing one foot over the other, and sliding on each in turn (Figs. 7, 8)—both ways in curved lines and on the edge of his skate.

Skating can be done on the flat of the skate, too (Fig. 9). but it requires great nicety of balance, for it allows neither thrust nor edge. Where, then, does the motive power come

from? Observe that it must come entirely from the *momentum imparted by the swing of the upper part of the body*. Now the combination of this momentum of the body with an edge instead of the flat of the skate, *without thrust*, is the proper motive power of most of the movements in figure-skating.



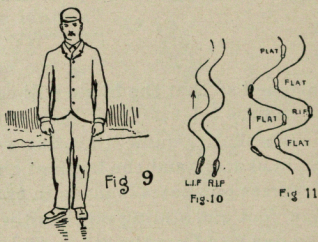
The throwing of the weight upon the skate-edge causes an immediate increase of speed in a curve, and forces the skater at the same time to incline his body inward, as in turning a corner on a bicycle, in order to keep his balance. The tendency of a moving body to continue in a straight line is painfully familiar to every boy who has jumped from a rapidly moving vehicle, or has played "tail-ender" in a game of "Snap the Whip."

The "bite" of the skate-edge in the ice, like the line of hands in "Snap the Whip," tends to pull the body toward the centre; the momentum of the moving body tends to throw it away from the centre. Many a fall must be suffered by the young figure-skater before he learns so to adjust his body that its momentum or rotation will let his skates go where he wants them to.

The inexperienced skater, intent solely upon the use of his feet, tries to make them do all the work—and with sorry results. When a discouraged skater was once asked why he had given up skating, he replied, with considerable humor, that it was "too sedentary an occupation for him!"

Three-quarters of all correct figure-skating is done with the shoulders. The proper position of the body, however, is not only the hardest to learn, but the hardest to describe. The diagrams necessarily lay undue stress upon the feet, but the figures—drawn from instantaneous photographs—may help to suggest the idea of continuous motion in the proper pose.

The true principle of progression in figure-skating is developed in the following movement, which should be studied closely on the ice, for it is the shortest cut to the correct edges, and the basis of all the "Grape-vines."



The Two-Foot Serpentine.

Stand with the skates about a foot apart. With a forward twist of the right hip, throw the weight of the body upon the right foot, as in walking, but stiffen the muscles of the leg, and keep the left foot on the ice parallel with the right. At the same time intensify the tendency of the inside edge to make a curve to the left by an effort of the right foot in that direction, mostly at the heel.



Fig. 14



Fig. 15

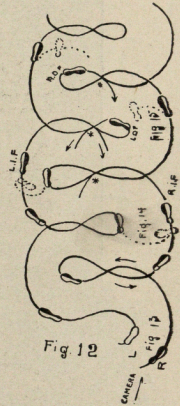


Fig. 12

Now let the whole body glide naturally in the direction in which the feet are going, and at the same time tilt the shoulders slightly back, as you do in walking when the free foot is going forward. After gliding a short distance, throw the weight, with a forward twist of the left hip, upon the left foot, and at the same time cut a deep inside edge curve near the heel, keeping right foot upon the ice parallel to the left.

Repeat the movement, with a see-saw of the body, hinging at the ankles. The result will be a slow, forward progression in a double serpentine line (Fig. 10).

Now, deepen the lobes of the serpentine by sliding longer before shifting the weight (Fig. 11). Just at the time when the



Fig. 13

inside edges are catching power, the other edge is becoming the flat of the skate. Slide still longer, until the lobes intersect; the flat will turn to outside edge, and you will be describing both inside and outside edges at once (Fig. 12).

If now, just as the right inside edge is catching power (Fig. 13), the left shoulder is drawn back, and the left foot thereby swung off from the ice around behind the right, toes well out, and pointing down—lo! the inside edge on one foot is an accomplished fact (Fig. 14).

If, just after catching power with the right foot, the weight is shifted to the left leg, and the right foot is swung off from the ice by a backward twist of the left shoulder, the outside edge on one foot is an accomplished fact (Fig. 15).

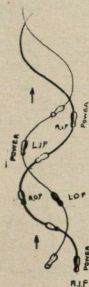


Fig 16

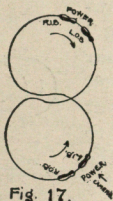


Fig. 17.



Fig 18



Fig 19

If the serpentine line is broken in a similar way on the opposite lobes, the same edges will be described on the other foot.

Now try the serpentine backward. The body swings will be similar to the forward swings, but the power will be caught by the inside edge near the toe instead of near the heel. The transition from curves on both feet to curves on one foot is easier backward than forward, because the inclination of the body necessary to maintain equilibrium is forward, not backward, and a skater has less fear of falling forward on his hands than backward on his head.

Start as before, but instead of keeping your feet parallel, cross them in alternating inside and outside curves. (Note the edges, Fig. 16.) It will be easier to begin with the right foot leading, inside edge, the left following closely across its track, outside edge.

The insertion of half-turns (threes) into this "chain-step" makes a grape-vine. Now try it backward, but instead of crossing the feet, let the right follow in the track of the left. When you have acquired perfect balance in this fine example of progression by momentum and edge, you will be able to skate the serpentine to place in the form of the Canadian Eight (Figs. 17, 18).

Before reaching that stage, however, you may find this "tracking" serpentine useful in perfecting your outer edge backward on one foot. By throwing the inner edge foot out of line, you may be encouraged to trust your whole weight upon the outer edge foot (Fig. 19), and finally to lift the other foot clear of the ice.

These four edge-curves, outer forward and backward, inner forward and backward, are the rudiments of figure-skating, and you must practise them until you can cut complete circles equally well on each foot.

Preserve the diagrams in this paper and in the following papers, and you will have interesting matter for study on the ice for many seasons.

The Rolls.

In skating the four edges described in the last paper, the position of the swinging foot is most important, especially when the curves are skated continuously, first on one foot and then on the other. If impetus is gained by an obvious push-off, the combined figures are only variations of plain skating; but if a

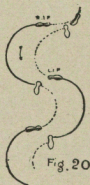


Fig 21

regular swing of the body, combined with an edge, successfully produces continuous progression without apparent thrust, the result is a true roll, whether in large curves or small.

Easy, unstudied grace is the most essential attribute of a roll, as of all figure-skating; but nothing can be more ungraceful than a spasmodic kick or strong thrust with one foot, which is then lifted high in the air or curled up behind with the leg bent at the knee.

The unemployed foot should swing naturally, almost as if it were a weight suspended from the hip by a string (Fig. 24).

Its movements will depend much upon the height and weight of the skater, and the speed with which he is going. No one position, therefore, can be prescribed for all skaters alike, as the "proper attitude." The foot should be guided less by conscious muscular effort in the leg itself than by the movements of the shoulders; and the more those movements contribute to keeping it near the ice, the more they contribute to graceful skating.

For example, it is easy to do



Fig.24

The Inside Edge Roll,

with body full-front, and the unemployed leg out a-straddle, ready to be used as a prop in case of loss of balance (Figs. 20, 21); but effort should be made with the shoulders to pull the unemployed foot close to the employed one (Figs. 14, 22).

When this roll is skated in an "eight," especially in a double-circle "eight," the swing of the unemployed foot into place may be utilized to increase the momentum necessary to complete the circles (Fig. 23), either forward or backward.

The Outside Edge Roll

is the first "fancy" skating that a young skater thinks he can do. But generally his roll differs from plain skating only in that the glide is longer and more on the outside edge. The motive power is still the same—a more or less labored kick-off at the end of each glide.

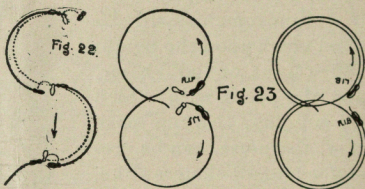
In a true roll, skated gracefully as a field figure, the unemployed foot should swing free, and there should be no apparent thrust after the first stroke which establishes the momentum, thus (Fig. 25):

Stand with the weight on the right foot, flat or inside edge; step upon the left foot, inside edge, as in walking, and with

an exaggeration of the forward swing of the body, launch your weight upon the right foot, outside edge. Stiffen the ankle, but bend the knee a trifle. Then turn the toes out more, straighten the knee, and throw the shoulders back, the right shoulder a little the lower (Fig. 24).

This motion of the body will have a tendency to shorten the curve, accelerate the speed, and throw the unemployed foot, which has been describing a circle close to the ice, forward and up in order to keep you from going over backward.

Now swing your body forward and launch the weight upon the left foot, which, by the forward tilt, has been pulled down and back, and swung, toes in, parallel to the right, just in the nick of time to receive it.

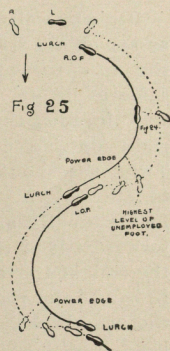


Unless you are very short and light, the momentum of the body is quite sufficient, without any apparent thrust from the right foot, to carry you round on the left outside edge until you straighten the knee, throw the shoulders back, the left a little the lower, catch more power with a strong edge, toes out, and preserve your equilibrium by a forward and upward movement of the right foot, which in turn is swung back, toes in, parallel to the left just in time to receive the forward lurch of the body again,—and perpetual motion seems almost established.

The above is an exaggerated statement of nearly all the movements. When you have got the knack of the swing, the knee must be stiffened at the beginning of the curve, and the upward movement of the unemployed foot reduced to a minimum by the pose of the shoulders.

Each glide finishes with a little piece of inside edge, and great effort must be made to conceal any thrust that may come from it.

This roll is skated only as a field figure; the corresponding backward roll is usually skated as a cross roll, which may be done both forward and backward, in field and to place as eights, single and double circle.



Cross Roll Forward.

It may be of service in this and the previous roll to revert to our practice step (Fig. 3). Leaning, if necessary, on the support of a friendly hand, walk several steps with the toes turned in—exaggerating the ordinary see-saw of the body. By and by, as the body lurches forward, slide on the right foot (Fig. 27), and by twisting, or screwing, the shoulders from left to right, swing the left foot around and *across* the right, so that with the

next forward lurch of the body it shall fall naturally into place, toes in, ready to receive the weight and take up the glide.

The shift of the weight lifts up the right foot, which, by twisting, or unscrewing, the shoulders from right to left, you swing around and *across* the left in the same way as before.

The turning in of the toes compels an outside edge in full half-circle (Fig. 26). Avoid thrusting with the toe of the rear skate as it leaves the ice. Do not shift the weight with a jump, especially in the

Cross Roll Backward.

Begin by walking several steps, as above, but backward and with the toes turned out (Fig. 4). Slide as before, but with a backward lurch of the body upon the right outside edge (Fig. 28). Twist the shoulders from right to left, and thus swing the left foot gradually around. A slight forward tilt of the body toward the end of the stroke will pull it *behind* the right, so that with the next backward lurch of the body it will be in place, parallel to the right, toes out, ready to receive the weight and take up the backward glide.

The shift of the weight lifts up the right foot, which, by twisting the shoulders from left to right, you swing around *behind* the left in the same manner; and one of the most graceful figures on the ice is under way (Fig. 29).

The spark of life that shall animate all these dull descriptions into living motion, the young skater must supply himself. That spark of life is *knack*. Until you hit upon the knack all by yourself, this last figure especially will seem discouragingly hard.

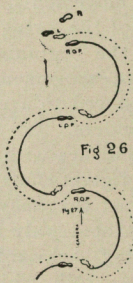


Fig. 26



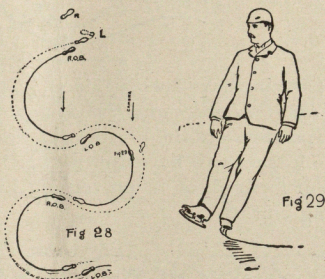
Fig. 27

You must, for instance, gain confidence to throw your weight boldly upon the back outside edge, mostly at the heel. Nothing will give you that confidence but success. Success, however, comes "all of a sudden," some day.

The long practice and the many bumps have, after all, been accomplishing something; the swinging foot at last goes back just at the right time and in just the right direction; and the rotary motion does not carry your centre of gravity beyond the support of the employed leg, because the edge is just right and the support is just where it ought to be: you can hardly believe the agreeable sensation real.

Can you do it again? You almost dread to try. Although your hips are sore and stiff, you venture. Yes, better than the time before! But you can't tell just how you do it, even now. You only wonder that you ever could not do it.

You let yourself fall upon the edge with perfect confidence that you will swing up all right; and you do. You can't miss it now if you try. At last the figure skates itself, and you, too, can "fly."



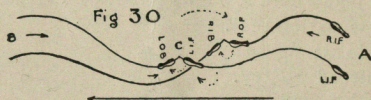
Change of Direction.

1. *On both feet.* So far, in our figures, progression has been either all forward or all backward. We now come to an important element in figure-skating,—the change of direction.

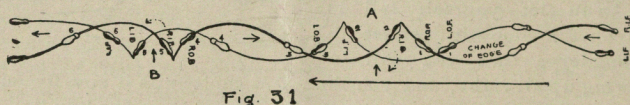
By progression is meant the general line of movement of the whole body (long arrow); by direction, the position of the skate in relation to that line. For example: the progression of the body in Fig. 30 is in a general serpentine line from *a* to *b*; if at *c*, when nearly all the weight is on the left inner edge, the

body is given a half-turn by the rotation of the shoulders, the direction of the skates is thereby changed from forward to backward. (Short arrows point with the face; dotted arrows show the direction of rotation. The cutting edge of a skate is shaded in the diagrams.)

When this turn, a "Three" on both feet, has been practised until it can be done equally well from forward to backward and from backward to forward, with rotation of the body from right to left and from left to right, the essential elements of the



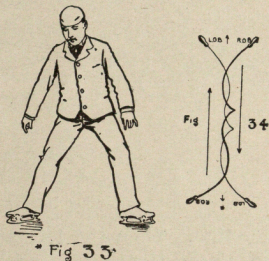
grape-vine have been attained. The knack of moving the feet *in the right order and time* is now the one thing needful. The grape-vines are the prettiest of the two-foot figures, but at first the learner will have difficulty either in keeping up his movement forward, or in preventing his perverse skates from tripping him up.



Let us try the Single Grape-vine (Fig. 31). Get up speed with a chain serpentine, right foot leading, and insert a turn from forward to backward. The secret of success is in the temporary awkward position of the feet at *a*, heels together (practice step, Fig. 4), the right just after turning, the left just before. Now while the right foot catches power with a strong edge near the toe (aided by a backward twist of the right shoulder), the left, receiving most of the weight of the body, acts as a pivot, turns slowly backward, and follows the right in a cross serpentine line. The right, now changed to outer backward

(O. B.), slows up, and allows the left, while changing to inner backward (I. B.), to pass it. (F. indicates "forward").

Then comes the more difficult turn, from backward to forward. The right foot turns first, and the secret of success is in the temporary awkward position of the feet at *b*, toes in (practice step, Fig. 3). Aided by a forward thrust of the right shoulder, the right foot catches power near the heel; and the left, receiving most of the weight, acts as a pivot, turns slowly forward, and follows the right as at the start. If the left foot precedes the right, the progression will be from left to right, instead of from right to left. When this grape-vine is perfected, it may be skated more easily and gracefully all on the outside edge.



The key situations, however, remain the same: at *b*, toes in, where the motive power is gained by pushing the feet together forward (Fig. 32); and at *a*, toes out, where the motive power is gained by pulling the feet together backward (Fig. 33). The latter position is exaggerated in the picture, because it was taken while the skater was performing the "Scissors," which consists in repeating the grape-vine between the outer points over the same tracks (Fig. 34).

If the serpentine glide is reduced to a minimum, and the figure compressed mostly into the turns, the grape-vine becomes the "Rail-fence" (Fig. 35). The Germans spread this figure a little, and call it "Knitting."



A "Double" Grapevine is different from a "Single" in that the body makes a whole revolution instead of a half-turn. Start as in the single grape-vine. When the right foot is turning

front of it on the inner edge forward, the double grape-vine will be made with three points up (Fig. 38).

This flip of the foot is the distinguishing feature of the "Philadelphia Twist," but being *o. b.* is much harder. The figure leaves four points up, and is generally skated backward; a strong forward start, however, may be made from a single grape-vine. After one turn, when the feet are crossed at *a* (Fig. 39), outsides together, left leading, flip the right around at right angles with the left, and by a violent twist of the shoulders (Fig. 40) screw the body around until the right foot gets to *b*; this position unlocks the left, which turns at *c*; another half-turn at *d*, *b* brings the body around one revolution, and the same movements are repeated on the other foot. The flipped foot must not scrape the ice.

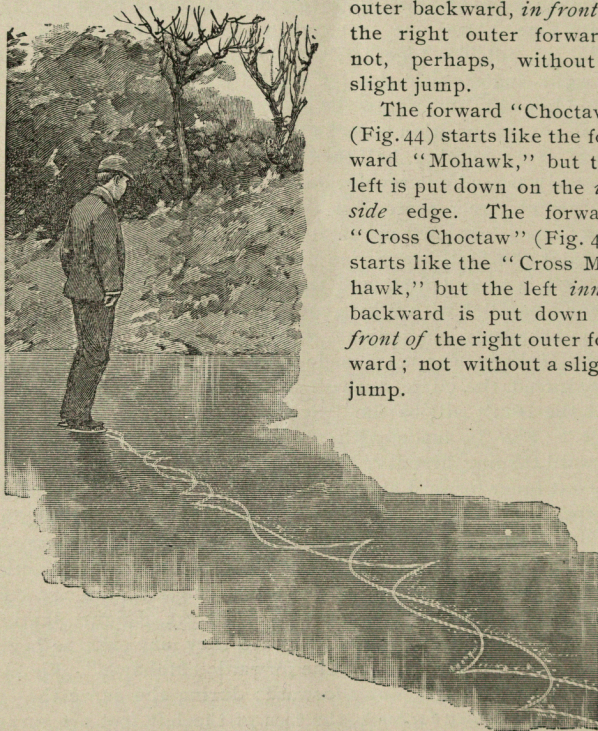
If at the first grape-vine turn (Fig. 41) the left is turned first, and the right swung around parallel with it by a complete revolution of the body, the points *c*, *d* will be inside *a*, *b*. If the turns *c*, *a* are made with the legs widespread, the curve *a*, *b* will intersect *c*, *d*, and the result will be the "Scissors Grape-vine." Fig. 41, made with the right outer forward turning first at *c*, instead of at *a*, and the left inner forward at *a*, instead of at *c*, is the "Pennsylvania Grape-vine." Make continuous figures by repeating Fig. 41, points down, the other foot turning first.



2. *From one foot to the other.* These changes of direction do not make graceful figures, but they are indispensable practice steps in the systematic acquisition of the art of figure-skating. There are four of each kind, because they may each be begun on each of the four edges. The forward "Mohawk" (Fig. 42) starts with the right outer forward; during the curve the left shoulder is drawn far back, the toes of the left foot are turned out as far as possible, and the left foot is placed, outer

backward, on the ice *behind* the right, which is immediately taken up.

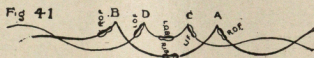
The forward "Cross Mohawk" (Fig. 43) starts on the same edge, but the left shoulder is thrown forward instead of backward, the toes of the left foot are turned in, and put down, outer backward, *in front of* the right outer forward; not, perhaps, without a slight jump.



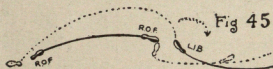
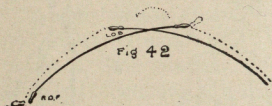
The forward "Choctaw" (Fig. 44) starts like the forward "Mohawk," but the left is put down on the *inside* edge. The forward "Cross Choctaw" (Fig. 45) starts like the "Cross Mohawk," but the left *inner* backward is put down *in front of* the right outer forward; not without a slight jump.

Fig. 32. The Single GrapeVine.

3. *On one foot.* The turns on one foot, corresponding in pose of body and mark on the ice to each of the four last figures, are, respectively, "Brackets" and "Threes" (with change of edge), and "Counters" and "Rockers" (without change of edge). The mark, of course, is continuous, the cross, or gap, being supplanted by a curvilinear angle.



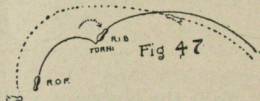
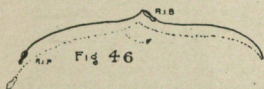
Take the position of Fig. 42, with the unemployed leg as far back as possible. When the curve has carried the right foot so far that it must turn on account of the sidewise position of the body, instead of putting down the left foot, lift the right heel just clear of the ice, so as not to trip, and continue on the same foot, inner backward, reducing as much as possible the rotation set up by the turn by striving to face the same way all the time. This one-foot turn is the forward "Bracket" (Fig. 46).



The secret of the "Three" and of the "Rocking Turn," as well as of the "Bracket," is that the body must turn the skate, not the skate the body. Take the position of Fig. 43; increase the screwing rotation, which has a tendency to shorten the curve (Fig. 47), so that in the proper position (Fig. 48) the natural momentum of the body makes a turn without any effort of the foot. As soon as the three is made, the right foot should take a

stiff inner edge backward on the heel and the left shoulder should be brought back, in order to counteract the rotation set up by the turn.

A forward "Counter Rocking Turn" is begun on the *same* edge as the forward "Three," but the rotation of the body is just the *opposite* (Fig. 49).



When the curve approaches the turn, the balance throws the unemployed foot across and up (*a*, Fig. 50), and it is brought down and back immediately *after* the turn with a swing that helps maintain the edge (Fig. 51).

The forward "Rocker" also begins like the forward "Three," but the rotation, which is right for the turn but wrong for the second curve, must be reduced as much as possible.

When the first curve approaches the turn, the left shoulder and unemployed foot are thrown violently around forward (*a*, Fig. 52); at the same time the heel of the right is lifted, and the body turned almost a half-revolution on the toe; the left shoulder is then as violently drawn back, and the swing of the left foot helps the right catch and keep a strong outside edge backward.



The easiest way to skate the "Rocker" is fast and straight; the "Counter," slowly and with deep curves.

Beware of introducing a little change of edge at the turn. The essential thing to remember is, that the rotation necessary

to make the second curve must begin, or be in mind, with the beginning of the first curve: the most accomplished expert cannot begin a three and change to a counter, or *vice versa*. Compare Figs. 48 and 49.

These turns are the most graceful movements made on the

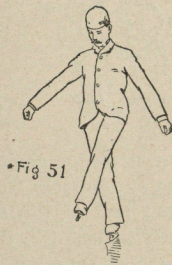


ice, and from no others do skaters get more delicious sensations. I have had space to describe only one of the four of each kind, but they should all be practised with the first curve begun on each of the four edges. When perfected, they may all be skated to place in eights, like the plain two-foot eights. Fig. 53 is a "Double-Three Eight."

Change of Edge, on One Foot.

An enthusiastic learner is neither afraid nor ashamed of a fall. He knows by experience that confidence and knack are acquired most quickly by bold, venture-some strokes, and, like a good foot-ball player, he soon learns *how* to fall.

When, however, he has learned not only the proper movement of the shoulders and of the unemployed foot, but also the change of edge on one foot, he need never, barring accident, fall at all; for the change of edge on one foot restores his balance, and gives him new momentum just at the time when he needs it to save himself. This change of edge is the connecting curve of all the combined one-foot figures; it is not only one of the most graceful, but also the most useful of all the strokes.

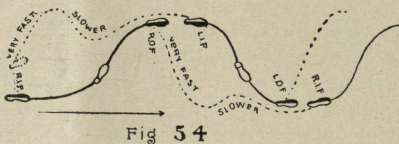
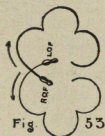


The principle is the simple one with which we started—a natural shift of body-balance combined with a change of skate-edge.

For example, start on the R. I. F. (Fig. 54); the inclination of the body naturally causes the left foot to fall away from the perpendicular; not only let it go, but throw it out sidewise with considerable effort—a movement which intensifies the edge, and thereby increases the momentum.



Now stiffen the ankle and knee of the right leg, turn the toes out, and incline the body over the outside edge. This movement naturally pulls the left back toward the perpendicular. Put it down in front of the right, *but not across*; at the same moment lift the right and throw it out sidewise, thereby intensifying the left inside edge. The shift of balance again to the

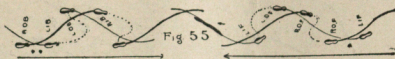


outside-edge position will pull the right back, in readiness to be put down in front of the left, and with the simultaneous lift and jerk of the left, the forward "Change of Edge" roll is established (Fig. 54). You may skate it, beginning on either foot, either edge, forward or backward.

If the feet are crossed, the strange effect may be produced of forward progression with backward movements, and backward progression with forward movements (Fig. 55).

In the "Reverse on to Richmond" (Fig. 56) the forward foot is swung across and around *behind* the other, but the changes of

edge carry you *forward*; in the "On to Richmond" (Fig. 57) the rear foot is swung around and across *in front of* the other, but the changes of edge carry you *backward*. The latter movement is suggestive of a tread-mill, except that, although appearing to walk forward, you actually go backward.

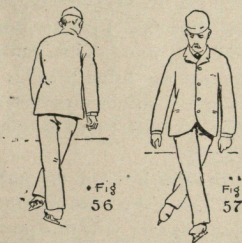


If the line of Fig. 54 is made continuous, the figure becomes the "One-foot Serpentine" when the lobes are small, the continuous "Change of Edge" when the lobes are large. In the former the key to success is in stiffening the knee and turning the toes of the employed foot well out, just as the unemployed is swung from its extreme sidewise position rapidly down behind the employed (*a*, Figs. 58, 59).

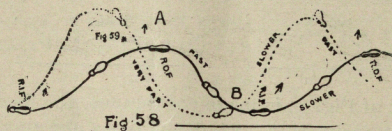
If the movements are simultaneous, the right will take a strong outside edge of sufficient motive power to carry the curve to *b*, where an inside edge and less vigorous jerk of the unemployed foot perpetuates the curve.

The rapid action of the unemployed foot is much more at right angles to the line of progression than at first appears from the diagram; for it must be borne in mind that the unemployed foot progresses along with the employed, and that even if it went out exactly at right angles to the employed, at the same rate of speed, its resultant line would be at an angle of 45° to the line of progression of the employed.

In the continuous "Change of Edge" proper, the swing of the unemployed foot is more complicated. After the outward jerk of the left foot that intensifies the right inside edge, it is



swung back into position for the inside glide that lengthens the lobe; when, therefore, the right is about to take the outside edge, the left is behind (compare Fig. 74); it is accordingly brought up alongside, thrust violently out forward, and then swung back into position for the outside glide.

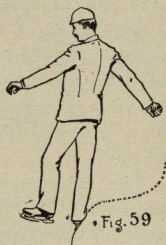


There is an "unscrew" twist of the shoulders from the beginning of the inside edge, and a "screw" twist at the beginning of the outside edge. (Reversed, if skated backward. Fig. 73.)

If the skater has difficulty in getting momentum enough to keep up the serpentine, he may take advantage of the rotation that bothers him to insert a turn and then continue. This makes the "Double Change of Edge" (Fig. 60), or "Arabesque," sometimes called the "Four Edges," half forward and half backward (Fig. 61).

Before he can accomplish this, however, in even one of its four ways, the young skater will find ample material for practice in the single changes and turns. A change of edge and a three, English skaters call a Q (Fig. 62). a three and a change of edge, a reverse Q (Fig. 63). There are, of course, four kinds of each for each foot. A reverse Q and a Q make the "Spectacles" (Fig. 64). Two double threes joined by a change of edge make the "Double Shamrock" (Fig. 65).

Single, double, and chain threes, joined by single, double, or continuous change of edge, skated on alternate feet at random over the ice, furnish restful and graceful pastime to the accom-



plished skater, and when the edge is firm and the rotation rapid, attractive entertainment to admiring spectators. Such "aimless skating" surely is more satisfactory than knocking a block about with a hockey stick, or playing tag, or the thousand and one ways in which boys and girls waste their time on the ice.

The fundamental principle which have formed the subject of these papers—the edge, the roll, the change of direction (turn), and the change of edge (on one foot)—are truly fundamental; either singly or in combination, they are "at the bottom" of every figure that can be skated.

I have described only a few of the combinations; an active boy or girl can find fascinating occupation for many minutes, that are usually frittered away, in perfecting these few and in devising new combinations.

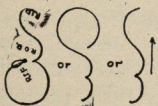
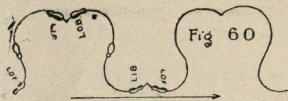


Fig. 63

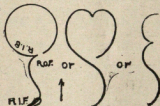


Fig. 62



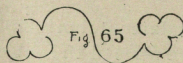
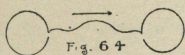
Fig. 6

The selection of figures has been described in an order which seemed to lend itself best to the systematic development of the principles; the figures are not necessarily to be learned in just the order in which they stand. I have described only one direction, generally on only one foot; beware of becoming, in consequence, only a right-footed, or only a forward, skater.

Study the proper pose and movement of the shoulders and of the unemployed foot, rather than the mark on the ice. It is true that the correct mark can be made only with the correct

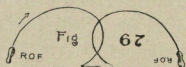
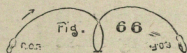
position of the body—but one may know the mark and be unable for years to skate it.

I think I was five seasons learning the counter-rocking turn. I knew exactly what mark it ought to make, but I was stupidly intent upon the mark. I did not begin the rotation for the sec-



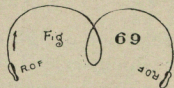
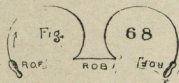
ond curve soon enough, and I used to start the unemployed foot around before turning, instead of just at the turn or immediately after. As soon as my mind was concentrated upon my body instead of upon my feet, the feet went all right.

Of course, unless you are exactly of the same size and weight



as I, your unemployed foot may not take exactly the course of mine, as indicated by the dotted lines in the diagrams.

At all events, acquire firm edges and steady control of your skates, and cultivate grace in all your movements. Then you may undertake the following figures, which, on account of their



lack of grace, or their difficulty, or both, should not be attempted too soon by an undeveloped skater.

“Loops” may be developed from threes in two ways. Start on R. O. F. to make a single three; intensify the rotation by bending the knee a trifle, and by extending the head and shoulders somewhat in front of the employed foot; keep the unemployed farther back than for the three. When the gliding foot

pauses momentarily just at the turn, screw the shoulders and the unemployed foot around with an effort that shall greatly increase the ordinary rotation for a three, and, if you are successful, the skate, after a little hitch, will continue across its own track in an oval curve (Fig. 66). By exaggerating the hitch and arresting the rotation with a backward glide of the skate, and then surging forward on the same edge when the unemployed foot comes around, you can make a "Cross-cut," or "Anvil" (Fig. 67).

Or you may start with a double three and reduce the middle curve to something like Fig. 68. By reducing it still further, the other two curves will intersect, and you will make the cross-cut (Fig. 67), which the Germans call the "American Loop." By reducing the hitch entirely away to a continuous curve (both here and above) you will have what we Americans call the "Loop" (Fig. 69).

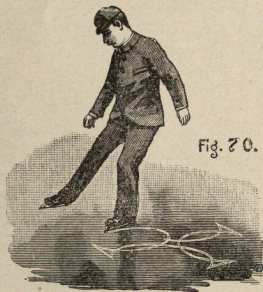


Fig. 70.

These loops and cross-cuts (four kinds each) may be skated on alternate feet, both in field and to place as eights, or may be introduced, in combination with turns and change of edge, into an infinite variety of field and place figures.

The single loop and single cross-cut are not graceful; but in combination a rotation is set up that relieves the awkward posture of the body and swing of the unemployed foot, and they produce a brilliant effect.

In Fig. 70 the unemployed foot in its most awkward position is acting as a balancing pole during the hitch-back of the employed foot, which will immediately turn forward on the curve completing the fourth cross-cut of the "Maltese Cross." Fig. 71 is a "Reverse Maltese Cross," with the cross-cuts inside.

When you can make the lobes of your continuous change of edge, on one foot, perfect circles, you are near the accomplishment of one of the most difficult figures skated. Before you acquire accurate balance, however, the figure will travel, because one change of edge will be stronger than the other (Fig.



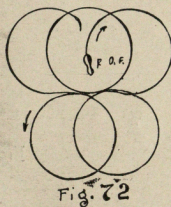
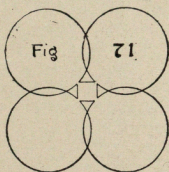
Fig. 73

72); but, after diligent practice, you may skate it to place as an eight, single and double circle, forward and backward (Figs. 73, 74).

By inserting in these eights brackets, threes, rocking-turns, loops, and cross-cuts, single and in combination, you may provide yourself with a series of difficult figures that many years of practice will not exhaust.

There remain only the spins, whirls, and ringlets; locomotives and spread-eagles; toe and heel movements; pig's ears and scrolls; partnership or club figures, and specialties—but these must be reserved until another time. The most fascinating thing about figure-skating is that there is always something more to learn.

Again, figure-skating not only does not debar its devotee from any of the exhilarating advantages of straight-away skating, but also has many other advantages of its own. Figure-skating is eminently social. Like cycling, it does not discriminate in sex—the girls have as good a chance as the boys, if they



will only take it. The enthusiast, on the other hand, may indulge in it quite by himself.

Unlike foot-ball, base-ball, and tennis, it does not need a "team" to make sport possible, or a contest to make it successful. Figure-skating exercises nearly every muscle in the body, but it does not put the muscles to so severe a strain as speed-skating or polo, and, consequently, is much better adapted to the strength of girls.

It is the very poetry of motion; the sensations of some of the turns are alone ample compensation for all the time spent in the acquisition of them.

Figure-skating is not without its moral value, also. It teaches its lover, especially in fickle New England winters, to make the best of every opportunity; for its worst enemies are

snow and thaw, and the laws of motion. The discipline of learning to counteract, or rather to conform to, those laws, is a discipline in training the powers of observation, perseverance, and will, as rigorous as the strictest philosopher can enforce.

Each new figure thus acquired is a pledge of power to acquire or invent more; for in the art of figure-skating, as in life, the variety is manifold and the possibilities are limitless.

